Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claim 1. (currently amended) A data storage device comprising:

a disk-shaped storage medium which has a data storage area and a servo area, the data storage area containing a plurality of data tracks which store user information, the servo area containing a plurality of servo tracks which store servo information for identifying positions of the plurality of data tracks;

a ~~hybrid~~ head slider which supports write and read heads, the write head writing user data on the data tracks of the disk-shaped storage medium, the read head reading the user data written on the data tracks; and

a rotary-type actuator which swings the ~~hybrid~~ head slider to position any one of the write and read heads at a target track of the disk-shaped storage medium, ~~wherein a read write offset value is set equivalent to an integer number N of the servo tracks,~~ wherein a pitch of the plurality of servo tracks is varied in the radial direction of the disk-shaped storage medium, and a read write offset value is thereby set equivalent to an integer number N of the servo tracks, the read write offset value being a deviation amount between the write and read heads in a radial direction of the disk-shaped storage medium, the deviation amount being caused by swinging of the ~~hybrid~~ head slider by the rotary-type actuator.

Claim 2. (currently amended) The data storage device according to claim 1, wherein ~~a pitch of the plurality of servo tracks is varied in the radial direction of the disk-shaped storage medium, and the read write offset value is thereby set equivalent to the integer number N of the servo tracks~~ the plurality of servo tracks are divided into zones, and the read write offset value is equivalent to a constant number of servo tracks that exist in each zone.

Claim 3. (original) The data storage device according to claim 1, wherein the integer number N varies with each predetermined number of the servo tracks.

Claim 4. (currently amended) A data storage device comprising:

a disk-shaped storage medium that has a data storage area and a servo area, the data storage area containing a plurality of data tracks that store user information, the servo area containing a plurality of servo tracks that store servo information for identifying positions of the plurality of data tracks;

a head slider that supports write and read heads, the write head writing user data on the data tracks of the disk-shaped storage medium, the read head reading the user data written on the data tracks; and

a rotary-type actuator that swings the head slider to position any one of the write and read heads at a target track of the disk-shaped storage medium, wherein a read write offset value is set equivalent to an integer number N of the servo tracks, the read write offset value being a deviation amount between the write and read heads in a radial direction of the disk-shaped storage medium, the deviation amount being caused by swinging of the head slider by the rotary-type actuator,

~~The data storage device according to claim 3,~~ wherein the integer number N increases stepwise from an inner diameter toward an outer diameter of the disk-shaped storage medium.

Claim 5. (currently amended) A data storage device comprising:

a disk-shaped storage medium that has a data storage area and a servo area, the data storage area containing a plurality of data tracks that store user information, the servo area containing a plurality of servo tracks that store servo information for identifying positions of the plurality of data tracks;

a head slider that supports write and read heads, the write head writing user data on the data tracks of the disk-shaped storage medium, the read head reading the user data written on the data tracks; and

a rotary-type actuator that swings the head slider to position any one of the write and read heads at a target track of the disk-shaped storage medium, wherein a read write offset value is set equivalent to an integer number N of the servo tracks, the read write offset value being a deviation amount between the write and read heads in a radial direction of the disk-

shaped storage medium, the deviation amount being caused by swinging of the head slider by the rotary-type actuator,

~~The data storage device according to claim 1,~~ wherein the write and read heads are positioned within a region where an error signal obtained from the servo information is linear.

Claim 6. (currently amended) The data storage device according to claim ~~1~~ 5, wherein the write and read heads are supported by the ~~hybrid~~ head slider while being located at a predetermined center distance from each other in the radial direction of the disk-shaped storage medium.

Claims 7-9. (canceled)

Claim 10. (currently amended) A servo information writing method for writing a burst pattern as servo information on a disk-shaped storage medium of a data storage device which has ~~a hybrid head including~~ write and read heads, comprising the steps of:

calculating a read write offset value within a predetermined range on the disk-shaped storage medium, the read write offset value being a deviation amount between the write and read heads in a radial direction of the disk-shaped storage medium; and

writing the burst pattern so that the measured read write offset value is equivalent to an integer number N of servo tracks formed by the burst pattern,

wherein the burst pattern is written so that a pitch of the servo tracks varies at a predetermined variation ratio in the radial direction of the disk-shaped storage medium.

Claim 11. (currently amended) The servo information writing method according to claim 10, wherein ~~the burst pattern is written so that a pitch of the servo tracks varies at a predetermined variation ratio in the radial direction of the disk-shaped storage medium~~ writing the burst pattern so that the measured read write offset value is equivalent to the integer number N of servo tracks formed by the burst pattern further comprises dividing the servo tracks into zones so that the read write offset value is equivalent to a constant number of servo tracks that exist in each of the zones.

Claim 12. (currently amended) A servo information writing method for writing a burst pattern as servo information on a disk-shaped storage medium of a data storage device that has write and read heads, comprising the steps of:

calculating a read write offset value within a predetermined range on the disk-shaped storage medium, the read write offset value being a deviation amount between the write and read heads in a radial direction of the disk-shaped storage medium; and

writing the burst pattern so that the measured read write offset value is equivalent to an integer number N of servo tracks formed by the burst pattern,

~~The servo information writing method according to claim 10,~~ wherein a pitch of the servo tracks is varied in relation to a predetermined pitch set as a standard.

Claim 13. (new) The servo information writing method defined in claim 12 wherein the integer number N increases stepwise from an inner diameter toward an outer diameter of the disk-shaped storage medium.

Claim 14. (new) The servo information writing method defined in claim 12 wherein the write and read heads are positioned within a region where an error signal obtained from the servo information is linear.

Claim 15. (new) The servo information writing method defined in claim 12 wherein the servo tracks are divided into zones, and the read write offset value is equivalent to a constant number of servo tracks that exist in each zone.

Claim 16. (new) The servo information writing method defined in claim 10 wherein the integer number N increases stepwise from an inner diameter toward an outer diameter of the disk-shaped storage medium.

Claim 17. (new) The servo information writing method defined in claim 10 wherein the write and read heads are positioned within a region where an error signal obtained from the servo information is linear.

Claim 18. (new) The servo information writing method defined in claim 10 wherein the servo tracks are divided into zones, and the read write offset value is equivalent to a constant number of servo tracks that exist in each zone.